

WHAT IS CLAIMED IS:

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1. A program rewriting device comprising:
  - a transmission unit that performs transmission and reception of data over a network to and from another device and other devices connected to the network;
  - a memory that stores a software program;
  - a type judgement unit that judges whether another device stores, in a rewritable manner, the same type of software program as the software program stored in the memory;
  - an old/new judgement unit that, when the type judgement unit judges that the another device stores the same type of software program in a rewritable manner, judges which of the same type of software program stored in the another device and the software program stored in the memory is older; and
  - a first rewrite unit that, when the new/old judgement unit judges that the same type of software program stored in the another device is older than the software stored in the memory, rewrites the same type of software program stored in the another device in the manner of the software program stored in the memory.
2. A program rewriting device as claimed in claim 1, wherein the memory stores the software program in a rewritable manner, and further comprising a second rewrite

unit that, when the old/new judgement unit judges that the same type of software program stored in the another device is newer than the software stored in the memory, rewrites the software program stored in the memory in the manner of the same type of software program stored in the another device.

3. A program rewriting device as claimed in claim 1, wherein the type judgement unit performs judgement for all other devices connected to the network; and the old/new judgement unit performs judgement on all other devices that are judged to store the same type of software program by the type judgement unit.

4. A program rewriting device comprising:

a transmission unit that performs transmission and reception of data over a network to and from another device and other devices connected to the network;

a memory that stores a software program in a rewritable manner;

a type judgement unit that judges whether the another device stores the same type of software program as the software program stored in the memory;

an old/new judgement unit that, when the type judgement unit judges that the another device stores the same type of software program, judges which of the same type of software program stored in the another device and the

software program stored in the memory is newer; and

5 a rewrite unit that, when the old/new judgement unit judges that the same type of software program stored in the another device is newer than the software stored in the memory, rewrites the software program stored in the memory in the manner of the same type of software program stored in the another device.

10 5. A program rewriting device as claimed in claim 4, wherein the type judgement unit performs judgement for all other devices connected to the network; and the old/new judgement unit performs judgement on all other devices that are judged to store the same type software program by the type judgement unit.

15 6. A network system comprising:  
a network;  
a program rewriting device connected to the network;  
another device connected to the network and having a memory that stores, in a rewritable manner, a software program; and  
20 other devices connected to the network, each having a memory that stores, in a rewritable manner, a software program,

wherein the program rewriting device comprising:  
a transmission unit that performs transmission  
25 and reception of data over a network to and from the

another device and all other devices connected to the network;

a memory that stores a software program;

5 a type judgement unit that judges whether the another device stores the same type of software program as the software program stored in the memory of the program rewriting device;

10 an old/new judgement unit that, when the type judgement unit judges that the another device stores the same type of software program in a rewritable manner, judges which of the same type of software program stored in the another device and the software program stored in the memory of the program rewriting device is older; and

15 a first rewrite unit that, when the old/new judgement unit judges that the same type of software program stored in the another device is older than the software program stored in the memory of the program rewriting device, rewrites the same type of software program stored in the another device in the manner of the software program stored in the memory of the program rewriting device.

20 7. The network system as claimed in claim 6, wherein the memory stores the software program in a rewritable manner, and further comprising a second rewrite unit that,

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when the old/new judgement unit judges that the same type of software program stored in the another device is newer than the software program stored in the memory of the program rewriting device, rewrites the software program stored in the memory of the program rewriting device in the manner of the same type of software program stored in the another device.

8. The network system as claimed in claim 6, wherein the type judgement unit performs judgement for all other devices connected to the network; and the old/new judgement unit performs judgement on all other devices that are judged to store the same type software program by the type judgement unit.

9. The network system as claimed in claim 6, wherein at least one of the program rewriting device and the another device includes a rewrite prevention unit that prevents rewrite of the software program stored in the memory of at least one of the program rewriting device and the another device, and wherein the first rewrite unit or second rewrite unit does not rewrite the software program that the rewrite prevention unit prevents the rewrite of.

10. A network system comprising:  
a network;  
a program rewriting device connected to the network;  
another device connected to the network and having a

memory that stores, in a rewritable manner, a software program; and

other devices connected to the network, each having a memory that stores, in a rewritable manner, a software program,

wherein the program rewriting device comprising:

a transmission unit that performs transmission and reception of data over a network to and from the another device and all other devices connected to the network;

a memory that stores a software program in a rewritable manner;

a type judgement unit that judges whether the another device stores the same type of software program as the software program stored in the memory of the program rewriting device;

an old/new judgement unit that, when the type judgement unit judges that the another device stores the same type of software program, judges which of the same type of software program stored in the another device and the software program stored in the memory of the program rewriting device is newer;

a first rewrite unit that, when the old/new judgement unit judges that the same type of software program stored in the memory of the another device is

older than the software stored in the memory of the program rewriting device, rewrites the same type of software program stored in the memory of the another device in the manner of the software program stored in the memory of the program rewriting device; and

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a second rewrite unit that, when the old/new judgement unit judges that the same type of software program stored in the memory of the another device is newer than the software stored in the memory of the program rewriting device, rewrites the software program stored in the memory of the program rewriting device in the manner of the same type of software program stored in the memory of the another device.

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11. The network system as claimed in claim 10, wherein the type judgement unit performs judgement for all other devices connected to the network, and the old/new judgement unit performs judgement on all other devices that are judged to store the same type software program by the type judgement unit.

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12. A memory medium storing programs comprising:

a first program of judging whether a device connected to a network stores, in a rewritable manner, the same type of software program as a software program stored in a reference memory connected to the network;

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a second program of judging which of the same type of

software program stored in the device and the software program stored in the reference memory is older when the device is judged to store the same type of software program in a rewritable manner; and

5           a third program of rewriting the same type of software program stored in the device in the manner of the software program stored in the reference memory when the same type of software program stored in the device is judged to be older than the software stored in the reference memory.

10           13. The memory medium as claimed in claim 12, further comprising a fourth program of rewriting the software program stored in the reference memory in the manner of the same type of software program stored in the device when the same type of software program stored in the device is judged to be newer than the software stored in the reference memory.

15           14. The memory medium as claimed in claim 12, wherein the first program judges for all other devices connected to the network; and the second program performs judgement on all other devices that are judged to store the same type  
20           software program by the first program.

15. A memory medium storing programs comprising:

503 43           a first program of judging whether a device connected to the network stores the same type of software program as a software program stored in a reference memory;

25           a second program of judging which of the same type of



software program stored in the device and the software program stored in the reference memory is newer when the first program judges that the device stores the same type of software program; and

5           a third program of rewriting the software program stored in the reference memory in the manner of the same type of software program stored in the device when the second program judges that the same type of software program stored in the device is newer than the software stored in  
10 the reference memory.

16. The memory medium as claimed in claim 15, wherein the first program performs judgement for all other devices connected to the network, the second program performs judgement on all other devices that are judged to store the  
15 same type software program by the first program.

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